



C A L I F O R N I A E N E R G Y C O M M I S S I O N

Grid Operations, Transmission & Distribution Systems and Electric Vehicles

Electric Program Investment Charge Southern California Kickoff Workshop

August 9th, 2012

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Purpose of Discussion Session

- Gather stakeholder input on investment areas and specific initiatives
- Provide feedback on proposed technology, resource, and strategy topic areas
- Prioritize investment topics
- Identify ways the Energy Commission can coordinate with organizations to leverage other efforts as well as avoid duplication

Discussion Session Expectations

- Speakers should identify their names and affiliation
- Speakers are limited to 3 minutes at a time
- Comments should be limited to the scope of CPUC EPIC decision
- Any additional input should be submitted in written comments by 8/17/12.



Grid Operations, Transmission & Distribution Systems and Electric Vehicles

- Provide IOU electric ratepayer benefits
- Increase cost competitiveness
- Mitigate variable renewable generation & electric vehicle impacts
- Help technologies overcome “valleys of death”
- Complement and leverage other public and private funding sources

Key Policy Drivers

- Renewables Portfolio Standard (RPS)
- Governor Brown’s Clean Energy Jobs Plan
 - 12,000 MW of localized renewables
 - 8,000 MW of large scale renewables
 - 6,500 MW of combined heat and power (CHP)
- State Alternative Fuels Plan
 - Displace 376 million gallons of gasoline with electricity.



Questions

1. What are the major barriers to developing and commercializing clean energy technologies?
2. Where should funding be placed to maximize the deployment of clean energy technologies? (i.e. where is technology innovation needed versus where is support for commercial scale-up the critical need?)
3. What specific initiatives are recommended to advance innovative energy technologies that benefit ratepayers?
4. Define the ratepayer need for which EPIC investment should be targeted.
5. Prioritize initiatives and identify the benefits that should be anticipated and measured, such as:
 - Energy and cost savings, grid reliability, job creation, economic benefits, environmental benefits, likelihood of return on investment, other.
6. What areas are already well covered by DOE and private funding?



Grid Operations, Transmission & Distribution Systems and Electric Vehicles

Potential Technology Areas:

- Smart Grid/Microgrids
- Electric Vehicle charging and grid integration
- Electric Vehicle efficiency and battery reuse
- Storage (including ancillary services)
- Renewable integration into the grid
- Grid system monitoring, Controls and Analysis
- HANs and related technologies
- Others?



Grid Operations

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Potential Initiatives

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- Electric Vehicle charging and grid integration
- Storage (including ancillary services)
- Renewable integration
- Grid Monitoring, Controls and Analysis
- HANs
- Others?



Transmission & Distribution

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Potential Initiatives

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Electric Vehicles

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Potential Initiatives

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Market Facilitation

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Potential Initiatives

- Performance data clearing house
- Innovation clusters
- Workforce development
- Others?

**Full Discussion
Tomorrow**



Written Comments

Submit written comments by 8/17/12 to:

E-mail: Docket@energy.ca.gov

Include “Docket No. **12-EPIC-01**” in the subject line

OR

California Energy Commission

Dockets Office, MS-4

Re: Docket No. **12-EPIC-01**

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